

WEST**End of Result Set****Generate Collection**

L2: Entry 2 of 2

File: DWPI

Jul 16, 1992

DERWENT-ACC-NO: 1992-242796

DERWENT-WEEK: 199230

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TITLE: Waste gas purificn. with nitrogen basic cpds. removing acid cpds. - by adding ammonia and alkali and/or alkaline earth cpds., for foundry, alkali chloride electrolysis, blast furnace, power station, refuse and glass industry

INVENTOR: FICHTEL, K; REGLER, H

PATENT-ASSIGNEE:

ASSIGNEE

CODE

FICHTEL K

FICHI

REGLER HK

REGLI

PRIORITY-DATA:

1991DE-4100645

January 11, 1991

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>DE 4100645 A</u>	July 16, 1992	N/A	005	B01D053/34

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-NO
DE 4100645A	January 11, 1991	1991DE-4100645	N/A

INT-CL (IPC): B01D 46/02; B01D 53/34; B01J 20/02; F23J 15/00

ABSTRACTED-PUB-NO: DE 4100645A

BASIC-ABSTRACT:

Nitrogen bases (IA) are injected above the dew pt. of H₂ in addn. to basic alkali and/or alkaline earth cpds. (IB), mixed with the gas stream and reacted and the solids are sepd. in dust separators. Zeolites are used as surfactant (II) together with (IB). Pref. (IA) is NH₃, ammonium salts, e.g. NH₄Cl, urea and/or prim., sec. and/or tert. amines, (NH₃ gas) (IB) is NaOH, KOH, NaHCO₃, Na₂CO₃, KHCO₃, K₂CO₃, quicklime, Ca(OH)₂, limestone, MgO, Mg(OH)₂ and/or MgCO₃, as solid, soln. or suspension. (IB) may be mixed with (II) (activated charcoal or coke), esp. lignite hearth furnace coke, activated Al₂O₃, SiO₂ gel, kieselguhr and/or zeolites. Molar ratio of (IA) (calculated as NH₃) to residual emissions of HCl and SO₂ is 0.01-10, (0.1-2) esp. 0.2-1. The (II) content of the (IB)/(II) mixt. is 0.1-95, (0.5-50) esp. 1-10%. (IA) is injected into the gas stream, before, during or after addn. of (IB), at 10 deg.C above the dew pt. of water vapour in the gas - 400 deg.C, (0-250) esp. 100-200 (120-180 deg.C). The process is one-stage process or as a stage, esp. the last stage, of a multistage process. After sepn. of acid impurities, additional NH₃ may be injected to reduce NO_x in subsequent reactors using activated charcoal or catalysts. Or NH₃ is injected in excess of the stoichiometric amt. for redn. of NO_x, (II), esp. activated charcoal is reduced and the unreacted NH₃ is used to separate residual SO₂ and HCl, using the molar ratios as above.

USE/ADVANTAGE - Used for ceramics industries, firing plant, Al smelters and combustion plant.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: WASTE GAS PURIFICATION NITROGEN BASIC COMPOUND REMOVE ACID COMPOUND
ADD AMMONIA ALKALI ALKALINE EARTH COMPOUND FOUNDRY ALKALI CHLORIDE ELECTROLYTIC
BLAST FURNACE POWER STATION REFUSE GLASS INDUSTRIAL

DERWENT-CLASS: E36 J01 J03 J09 L01 M24 M25 Q73

CPI-CODES: E11-Q02; E31-B03D; E31-F01A; E31-H01; E31-N04D; E31-P03; E32-A02;
E32-A04; E33-A03; E33-D; E33-F; E34; J01-G02; J01-G03; L01-C; L02-A; M11-B;
M24-A07A; M25-F; M25-X;

CHEMICAL-CODES:

Chemical Indexing M3 *01*

Fragmentation Code

A111 A119 A220 A940 C017 C100 C101 C106 C108 C500
C530 C550 C730 C800 C801 C802 C803 C804 C805 C806
C807 K0 L4 L432 M280 M320 M411 M416 M620 M781
M782 M903 M904 M910 N163 Q431 Q436 Q439 Q452 Q466
Q469 Q508

Specific Compounds

00123R 01151R 01202R 01278R 01287R 01359R 01391R 01502R 01509R 01510R
01514R 01713R 01947R

Chemical Indexing M3 *02*

Fragmentation Code

C107 C108 C216 C307 C520 C540 C730 C800 C801 C802
C803 C804 C805 C807 M411 M750 M903 M904 M910 N163
Q431 Q436 Q439 Q452 Q466 Q469

Specific Compounds

01674X 01784X

Chemical Indexing M3 *03*

Fragmentation Code

C500 C730 M411 M417 M781 M782 M903 M904 N163 Q431
Q436 Q439 Q452 Q466 Q469 Q508

Specific Compounds

03584R

Chemical Indexing M3 *04*

Fragmentation Code

A100 A111 A313 A950 B114 B701 B712 B720 B831 C108
C802 C803 C804 C805 C807 M411 M417 M781 M782 M903
M904 N163 Q431 Q436 Q439 Q452 Q466 Q469 Q508 Q616

Specific Compounds

07707R

Chemical Indexing M3 *05*

Fragmentation Code

C017 C100 C101 C730 C800 C801 C804 C805 C806 C807
M411 M750 M903 M904 M910 N163 Q431 Q436 Q439 Q452
Q466 Q469

Specific Compounds

01704X

Chemical Indexing M3 *06*

Fragmentation Code

M781 M782 M903 M904 N163 Q431 Q436 Q439 Q452 Q466
Q469 Q508

Chemical Indexing M3 *07*

Fragmentation Code

A212 A220 A940 C101 C106 C108 C530 C550 C730 C801
C802 C803 C804 C805 C807 M411 M781 M782 M903 M904
M910 N163 Q431 Q436 Q439 Q452 Q466 Q469 Q508

UNLINKED-DERWENT-REGISTRY-NUMBERS: 0123U; 1151U ; 1202U ; 1278U ; 1287U ;
1359U ; 1391U ; 1502U ; 1509U ; 1510U ; 1514U ; 1674U ; 1704U ; 1713U ; 1784U ; 1947U

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1992-108817

Non-CPI Secondary Accession Numbers: N1992-185229

WEST

Generate Collection

L2: Entry 1 of 2

File: EPAB

Jul 16, 1992

PUB-NO: DE004100645A1

DOCUMENT-IDENTIFIER: DE 4100645 A1

TITLE: Waste gas purificn. with nitrogen basic cpds. removing acid cpds. - by adding ammonia and alkali and/or alkaline earth cpds., for foundry, alkali chloride electrolysis, blast furnace, power station, r

PUBN-DATE: July 16, 1992

INVENTOR-INFORMATION:

NAME

COUNTRY

REGLER, HANSJOERG

DE

FICHTEL, KONRAD DR

DE

ASSIGNEE-INFORMATION:

NAME

COUNTRY

REGLER HANSJOERG

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FICHTEL KONRAD DR

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APPL-NO: DE04100645

APPL-DATE: January 11, 1991

PRIORITY-DATA: DE04100645A (January 11, 1991)

INT-CL (IPC): B01D 46/02; B01D 53/34; B01J 20/02; F23J 15/00

EUR-CL (EPC): B01D053/50; B01D053/68

ABSTRACT:

Nitrogen bases (IA) are injected above the dew pt. of H₂ in addn. to basic alkali and/or alkaline earth cpds. (IB), mixed with the gas stream and reacted and the solids are sepd. in dust separators. Zeolites are used as surfactant (II) together with (IB). Pref. (IA) is NH₃, ammonium salts, e.g. NH₄Cl, urea and/or prim., sec. and/or tert. amines, (NH₃ gas) (IB) is NaOH, KOH, NaHCO₃, Na₂CO₃, KHCO₃, K₂CO₃, quicklime, Ca(OH)₂, limestone, MgO, Mg(OH)₂ and/or MgCO₃, as solid, soln. or suspension. (IB) may be mixed with (II) (activated charcoal or coke), esp. lignite hearth furnace coke, activated Al₂O₃, SiO₂ gel, kieselguhr and/or zeolites. Molar ratio of (IA) (calculated as NH₃) to residual emissions of HCl and SO₂ is 0.01-10, (0.1-2) esp. 0.2-1. The (II) content of the (IB)/(II) mixt. is 0.1-95, (0.5-50) esp. 1-10%. (IA) is injected into the gas stream, before, during or after addn. of (IB), at 10 deg.C above the dew pt. of water vapour in the gas - 400 deg.C, (0-250) esp. 100-200 (120-180 deg.C). The process is one-stage process or as a stage, esp. the last stage, of a multistage process. After sepn. of acid impurities, additional NH₃ may be injected to reduce NO_x in subsequent reactors using activated charcoal or catalysts. Or NH₃ is injected in excess of the stoichiometric amt. for redn. of NO_x, (II), esp. activated charcoal is reduced and the unreacted NH₃ is used to separate residual SO₂ and HCl, using the molar ratios as above. USE/ADVANTAGE - Used for ceramics industries, firing plant, Al smelters and combustion plant.